



High Energy Group From China Ends Four-Day Visit

A 13-member delegation from the Scientific and Technical Association of China, who had been visiting Brookhaven Lab for the past four days, ended its visit on Friday morning.

The visit is being hosted by the Committee on Scholarly Communication with the People's Republic of China, which is jointly sponsored by the American Council of Learned Societies, Social Science Research Council and the National Academy of Sciences.

This delegation is one of the scientific groups to visit the United States agreed upon by Dr. Henry Kissinger in consultations with the People's Republic of China in February 1973. Other scientific delegations will include a team of computer experts and an insect hormone team.

Groups that have visited in the past are the table tennis team that visited in the spring of 1972, a medical delegation that visited in October 1972, a multidisciplinary group of scientists that toured in November and December of 1972, and the Shenyang Acrobatic Troupe that toured in December and January of 1972-1973. A hydrotechnical study group is currently touring the United States and will stay through early June 1973.

The delegation arrived in New York on Sunday, May 20, and will spend approximately four weeks in the United States. They are scheduled to visit Argonne National Laboratory, The National Accelerator Laboratory, Stanford Linear Accelerator, and the Lawrence Berkeley Laboratory - all unclassified installations which have been seen by many international visitors.

While at Brookhaven, the scientists spent many hours visiting in the offices and labs of Brookhaven's high energy researchers, and were guests in the homes of some of the BNL staff. Group and individual conferences were held in order to give the visitors a chance to see the advances in high energy physics that have occurred in the United States in the past two decades.

On Thursday evening the group was honored with a reception and dinner in Berkner Hall hosted by Associated Universities, Inc. and the Director of Brookhaven National Laboratory.

After leaving Brookhaven on Friday morning, the group traveled by bus to Stony Brook for a short tour of the State University before returning to New York.

No Bulletin Next Week

Because of the long Memorial Day holiday, the *Brookhaven Bulletin* will not be published on Friday, June 1.

Chinese Scientists Visit



Before boarding a bus for a short tour of the Lab, members of the visiting delegation posed for a picture with Brookhaven staff members.

ACA Warren Award To Shirane and Axe

Gen Shirane and John D. Axe, both of the Physics Department, have been named joint winners of the 1973 Bertram Eugene Warren Diffraction Physics Award. Presentation of the award will be at the American Crystallographic Association's June meeting at the University of Connecticut in Storrs.

Shirane and Axe were cited for their joint work on lattice and molecular dynamics, primarily as studied by inelastic scattering of neutrons. Selection for the award has been in process for the past year, with nominations solicited from over one hundred of the better known crystallographers representing 17 countries.

After completing his Ph.D. at the University of California in Berkeley (1960), Axe was an NSF Fellow at Johns Hopkins University. He was subsequently with the IBM Research Center in Yorktown Heights, New York (1962-68) before joining Brookhaven in 1969. His major scientific interests are in crystal field effects in rare-earth ions, infrared optical properties of solids, and the study of collective excitations in solids with inelastic neutron scattering.

Shirane, who received the American Physical Society's Buckley Prize in March for similar work, is primarily interested in the study of ferroelectric, structural and magnetic phase transitions.



Shortly after the delegation arrived at Brookhaven a discussion on high energy physics was underway with Professor Chang Wen-yu (second from left) who was head of the group of visiting scientists. To the left is Special Consultant to the Director Leland Haworth. Third from left is Laboratory Director George Vineyard, and Associate Director for High Energy Physics R. Ronald Rau.

Perimeter Marathon Set For Next Friday

Brookhaven's second Perimeter Marathon is scheduled for a 5:15 starting gun next Friday, June first. Entrants are asked to report to the starter at the Meteorology Building on Brookhaven Avenue as close to the starting time as possible.

Robert Powell, Reactor, will again be official starter, and will be assisted by Jack Phillips and Jerry Kinne. Assistant timekeepers will be Georgia Irving and Mrs. A. Prince. It is hoped that members of the Radio Club will again assist with keeping track of the runners as they proceed through the ten-mile course.

Entry for this event is restricted to active employees of the Laboratory. Another run projected for the Fall of the year will be open to all runners. Entrants will be asked this year to report to the starter if they drop out of the race before finishing.

While plans are not yet completed for awards, it is expected that a trophy will be presented to the winner. Awards to all finishers are being discussed, but at this writing have not been settled. As in the past event, the cafeteria caterers will again co-operate by supplying refreshments to the runners and officials.

IAEA Opening

Details posted at Office of Scientific Personnel, 40 Brookhaven Ave.

Details posted

Warren Award Winners



Physics Department Chairman Joe Weneser (right) discusses research at the HFBR with Warren Award winners John Axe (left) and Gen Shirane (center). The two physicists were cited for their joint work on lattice and molecular dynamics.



Dr. Ling-Lie Wang, Physics Department, chats with members of the visiting delegation from the People's Republic of China in Berkner Hall. Dr. Wang interpreted welcoming remarks made to the delegation by Lab Director George Vineyard.

Diners Note

Memorial Day and the day following are BNL Holidays, affording most of us a four-day weekend, May 26, 27, 28 and 29.

The Brookhaven Center will be closed on Saturday, Sunday and Monday and will reopen on Tuesday, May 29 at 5:00 p.m.

The Cafeteria will maintain normal holiday hours of 9:00 a.m. until 2:00 p.m. on each of the four days, Saturday through Tuesday.

The Vended Food Service in Building 912 will be in operation throughout the holidays.

Science Congress Honors Awarded

Twenty-six high school students ranging in age from 15 to 18 years competed at Brookhaven National Laboratory for top honors at the 22nd New York State Science Congress on May 17, 18 and 19, 1973.

The five girls and twenty-one boys demonstrated their science projects to a panel of six judges drawn from the scientific staff of the AEC's center for nuclear research on Long Island. Most of the contestants had already won top honors in a regional contest before becoming eligible for the state-wide competition at BNL.

The 26 finalists were accompanied to Brookhaven by their teachers and their parents, and participated in a three-day program that included tours, receptions, ceremonies, and culminated in an awards banquet on Saturday night.

Opening ceremonies of the Congress began at 9 a.m. on Friday, May 18, with a welcoming address by Brookhaven Associate Director Dr. Victor P. Bond, and Dr. Matthew C. Cordaro, Manager of Environmental Engineering, Long Island Lighting Company. The public was invited to view the projects and witness the judging in the Berkner Conference Center.

Categories of projects entered in the contest were: biology, conservation, chemistry, physics, earth sciences, aerospace, and mathematics. Judges were Gerald W. Bennett, Accelerator Department; Richard H. Houghton, III, Biology Department; J.B.H. Kuper, Director's Office; Claire J. Shellabarger, Medical Department; Robert Thomas, Chemistry Department; William J. Schneider, Accelerator Department; and Professor Max Dresden, SUNY at Stony Brook.

On Friday evening, following an informal program, two "scientific answer men," Dr. Donald Borg, Medical Department and Stephen Shapiro, Accelerator Department, answered questions from the budding scientists. BNL Assistant Director Dr. R.C. Anderson was the keynote speaker at the awards banquet on Saturday night.

The Congress is sponsored by the Science Teachers Association of New York State (STANYS) with financial support from the Long Island Lighting Company. Co-chairmen of the Congress are: Edith Stillwaggon, Division Avenue High School, Levittown; and Keith W. Calkins, South Side Senior High School, Rockville Centre.

Top winners were: Clifford T. Cockerham, 16 years old, grade 11, Mexico Academy and Central, project on "A Profile Study of Sound Pollution"; Peter Goldman, 17 years old, grade 12, Valley Stream Central High School, project on "Nuclear Quadrupole Resonance Spectroscopy"; Nina Hochstim, 15 years old, grade 10, South Side Senior High School, project on "Crown Gall Disease - Transmission and Treatment"; and Martin Reynolds, 17 years old, grade 11, Patchogue-Medford High School, project on "Irradiation of Chemical Indicator Dyes," winner of a special AEC award of "A Day with a Scientist" at Brookhaven National Laboratory.

CREF Unit Values

| 1972 | | | |
|-----------|---------|----------|---------|
| January | \$48.27 | February | \$50.49 |
| March | 51.36 | April | 51.80 |
| May | 53.74 | June | 51.80 |
| July | 51.15 | August | 51.95 |
| September | 50.98 | October | 50.80 |
| November | 52.53 | December | 53.25 |
| 1973 | | | |
| January | \$50.36 | February | \$47.11 |
| March | 46.44 | | |
| April | \$43.69 | | |

Brookhaven Bulletin

Published Weekly for the Employees of Brookhaven National Laboratory

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Top honors winner, Peter Goldman, presents his project to the judges in Berkner Hall on Friday.

Science Congress Highlights

Banquet speaker R.C. Anderson with High Honors winner Nina Hochstim.

Opening ceremonies were officiated at by Associate Director Victor Bond (left), LILCO Environmental Engineer, Dr. Matthew Cordaro (center) and Science Congress Director, Mrs. Edith Stillwaggon.

Norm Fewell points out the details of the operation of the 200-MeV linac to science students.

Ken Grist of Biology showed the touring students and teachers a model of a myoglobin molecule.

Herb Nakatani explains how plants are irradiated with gamma rays in Biology's radiation cell.

Gary Hilton adjusts controls for his robot mechanical man.

Alan Gorski studied stellar spectroscopy with a telescope.

Chris Scolese used rockets for a study of aerodynamic forces.

Kayak Demonstration

The BNL Mountain Club will present a kayak demonstration and two films on kayak racing and downriver canoeing.

The films will be shown in the Gymnasium starting at 7:00 p.m. on Thursday, June 7, and the demonstration will begin in the Pool at 8:30.

All employees welcome. No admission fee.

Arrivals & Departures

| Arrivals | |
|----------------|---------|
| Thomas B. Rice | Biology |
| Departures | |
| None. | |

Holiday Pool Schedule

The Pool will be open this Saturday and Sunday, May 26 and 27 from 1:00 to 6:00 p.m.

It will be closed on Monday and Tuesday, May 28 and 29.

The normal schedule will be resumed on Wednesday, May 30.

Here and There

Claire Lamberti

Paul Michael (Meteorology) recently attended a conference on The Ocean, Nuclear Energy and Man at Palm Beach Shores, Singer Island, Florida; his talk was entitled "Preliminary Measurements of Over-Ocean Atmospheric Diffusion." The conference was co-sponsored by the American Nuclear Society.

Gertrude Goldhaber (Physics) lectured at several universities and laboratories on work carried out by herself and her associates, **Alex Lumpkin**, **Michael McKeown**, and **William Piel, Jr.** On March 15 she spoke at Los Alamos Scientific Laboratory; on March 19 at the Carnegie Mellon University in Pittsburgh; on April 5 at the State University of New York in Buffalo; and on May 9 at Rockefeller University in New York.

Conservation Note

The energy crisis is real. The supplier of gasoline for government vehicles has advised that deliveries during the summer will be significantly less than our normal requirements.

We can all help. Subdue the urge to drag race or speed and, most importantly, shut off engines. **An idling vehicle burns enough gas for a fresh start every 20 seconds.** Prolonged idling is not only unnecessary but shortens engine life and plug life, and increases sludge in the crank case. Now we have a new effect; the next trip may be on foot.

You may want to apply these ideas to your own car too. Driving habits concerning acceleration and speed and the general tuning of your car can have marked effects on gasoline mileage. Two or three more miles per gallon isn't much, **unless** you have to walk or "thumb" the difference.

Selected Reading

New Sci. 58, May 3, 1973
Restructuring higher education. O.I. Soloukhin and S.T. Belyaev. 274-5
A future for the scientist. I. Low. 287

Newsday, April 24, 1973
For C.N. Yang, physics is a creative art. E. Lane. 4A-5A+

Recherche No. 32, March 1973
Dossier: La révolte des scientifiques. P. Thuillier. 207-13

Science, 180, May 5, 1973
British science policy: After the "great debate." J. Walsh. 477-81

The President's energy message: A challenge to the legal profess on. W.O. Doub at the 28th Annual Meeting of the Federal Power Bar Association, Washington, D.C., May 3, 1973. AEC Press Release No. S-6-73

Softball

Dick Ruffing

Brookhaven League

The 1973 softball season officially opened Tuesday evening with two games scheduled in the Brookhaven League. Everything was in readiness except a little cooperation from the weatherman. Both games were called off because of wet field conditions.

National League

Wednesday night the weatherman was a little more cooperative. Although cool, the sun was shining and the season was able to get underway. The Circuits proved to be a strong contender as they defeated the EAO team 15-5. In the other game played, a strong S&M team defeated the Bio-Meds 29-5. A 13-run third inning for S&M proved too much for the Bio-Meds.

Laboratory League

The Bubble Boys ran out of numbers for the scoreboard as they defeated the Concerts 50-5. At least 10 homeruns were hit by the Bubble Boys. In the second game of the evening, George Sabine's Phoubars scored 3 runs in the bottom of the seventh inning to defeat Fred Hohmann's Charlie Browns 11-10.

EMERGENCY PHONE NUMBERS

Medical 2222
Fire 3333
Police 4444

Tennis Ladder

After receiving an enthusiastic response to our initial announcement, the tennis committee has decided to establish tennis ladders for men's and women's singles. The primary purpose of the ladders will be to provide a vehicle for people to meet new players and there will be no prizes awarded for order of finish. Play will begin June 15. Matches will consist of an 8-game set, and players will be required to answer challenges within two weeks or forfeit. Those who wish to sign up and who have not already done so should contact Tom Koetzle, extension 4384, building 555. A list of participants and detailed rules governing challenges will be posted at the Tennis Courts on June 6.

The Spider's Web

Agatha Christie's *Spider's Web*, the production currently being prepared by the Theatre Group, will be presented in the Theater on Saturday and Sunday, June 9 and 10, and Friday and Saturday, June 15 and 16, at 8:30 p.m. Special attention is called to the Sunday performance on June 10.

Mary Kinsley, ticket chairwoman, has arranged for tickets to be sold by the following ladies in their respective departments:

Diane Fedorenchik HFBR
Eena-Mai Franz Chemistry
Claire Hull Medical
Helen Keeley AGS
Mary Kinsley DAS
Iris Mastrangelo Biology
Ruth Otterstedt AMD
Christine Saitta Phys. Rev.
Marge Stoeckel Fiscal
Pat Towey Physics



Dave Miller, AGS, in charge of set construction for *Spider's Web*, inspects a window flat backstage at the Theater.

Tickets will also be sold at the BERA Sales and Services Office in the Cafeteria between the hours of 7:30 - 11:15 and 11:45 and 2:30.

Admission fees are:
Employee and Family \$2.00
Visitor 2.50
Under 18 and Senior Citizen 1.00

The play is a lively romp through a particularly English murder with the surprise ending expected from Agatha Christie.

Bring your family and friends to *Spider's Web* and you will have a charmingly entertaining evening.

Iris Mastrangelo

Cafeteria Menu

Week Ending June 1, 1973

Monday and Tuesday, May 28 and 29
Snack Bar Open 9:00 a.m. to 2:00 p.m.

Wednesday, May 30
Vegetable Soup
Chinese Pepper Steak on Rice .99
Chicken Stew Casserole .90
Fish Fillet Parmesan & 1 Veg. .99

Thursday, May 31
Turkey Noodle Soup
Grilled Ham & Cheese on Toasted English w/Pickled Beets .85
Veal Patty w/Noodles Oregano .90
Braised Beef a la Mode & 1 Veg. 1.05

Friday, June 1
Clam & Celery Soup
Fried Shrimp w/Tartar Sauce
& French Fries 1.05
Barbequed Breast of Lamb & 1 Veg. .99
Broiled Halibut w/Carlton Butter & 1 Veg. .99

Spring Tea



Mrs. Norma Chernick (seated) pours coffee for members of the Hospitality Group gathered in the Brookhaven Center for the Spring Tea. Left to right are: Terri Pittenger, Chairman; Jane Love, Lee Schwender, Pat McKenzie-Wilson, Lela Radeka, and Grace Cohen. The tea was attended by over 100 ladies including some of the recent newcomers to the Lab.

Registration Now Open For Summer Rec Program Swim Lessons — Play Sessions

The summer of '73 will bring back to BNL the Children's Summer Program. The revitalized Morning Play Session and the Swimming Lessons, sponsored by BERA, will be under the guidance of George Sabine, BNL's Recreation Supervisor. Both programs, which will begin on July 9, will be supervised by qualified counselors and instructors.

The Morning Play Session for on-site residents' children, will be held at the Recreation Building in the Apartment Area Monday through Friday from 9:00 to 11:30 a.m. Children may attend any or all sessions. The registration fee is \$10 per child and children must be at least five years of age in order to participate. This program will consist of games, play activities, and supervised instruction in sports. There will be various special events and parties.

Swimming Instruction will be conducted at the BNL Pool Monday through Friday from 1:00 to 2:30 p.m. Instruction will be provided for non-swimmers, beginners, advanced beginners, intermediate, and swimmers. Children will attend swimming lessons one day per week. The program is open to the children of all BNL employees and guest collaborators and consultants. Children must be at least 48 inches tall. The registration fee for the Swimming Program is \$10 per child.

The Childrens' Summer Program has met with great success in the past, and has provided a great deal of enjoyment and recreation for the "kids" during those long, hot summer days.

Each child participating in the program will receive a BERA T-shirt and will be eligible to attend the gala "water carnival" to be held in August at the end of the summer season.

Special events will be held on Fridays at 3:00 p.m. at the BNL Pool for children of all ages.

Applications for registration in the Summer Program can be obtained at the BERA Sales and Service Center in the Cafeteria. For additional information call the Recreation Office, extension 2873.

Sign your youngsters up for a summer of fun. Please don't be left out and disappointed. Register early! Deadline will be June 29, or before if class maximum is reached.

BERA Sales and Services, located at the cafeteria, has the following tickets available for the Mets Baseball games for the months of June and July.

| | | |
|---------|------|--------------|
| June 17 | Sun. | San Diego |
| June 25 | Mon. | Chicago |
| June 27 | Wed. | Philadelphia |
| July 28 | Sat. | Montreal |

Office hours: 7:30 - 11:15 and 11:45 - 2:30

Classified Advertisements

Placement Notices

Each week, the BROOKHAVEN BULLETIN lists personnel placement requisitions currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves or others whom they wish to recommend to BNL. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, please contact Employment Supervisor, extension 2879 or 2882.

WAREHOUSEMEN (4) - Temporary summer positions. Supply & Materiel Division.

TECHNICIAN II - Duties will include operating various copy machines. Evening shift. Photography & Graphic Arts.

SECRETARY - Typing and general secretarial skills required for work in the hospital. Medical Department.

VETERINARY SERVICES ASSISTANTS - Temporary summer positions for college veterinary students. Medical Department.

SECRETARY - General secretarial duties, including Stenorette. Director's Office.

Autos & Auto Supplies

65 CHEVY - 6 cyl, std shift, clean, 30,000 mi. \$500. George, Ext. 4460.

68 LE SABRE - Ps/pb, am radio, 2 snows, motor excel, body slightly rusty. \$1200. Pat, Ext. 4763.

63 DODGE DART - 6 cyl, new rubber & batt, compl tuneup, excel running cond, body rusty. Tony, Ext. 4650.

62 VW VAN - 50 hp 66 VW motor, paneled, carpeted, sink, stove, toilet, stereo, sleeps 2, 11x15 beach tires, many extras. \$450. 281-0889 after 5.

PONTIAC BIG BLOCK - Tri-pwr manifold w/carbs, just rebuilt. \$30. 878-4115 after 4.

63 MERCURY MONTEREY - Needs muff, good 2nd car, very dependable. \$50. 281-5827 eves.

59 VW - Lt blue, excel mech cond, very clean, 4 spd, r/h. \$850. Ext. 4670, 744-3945.

69 CHRYSLER - Good cond, ps/pb, air cond, extra snows. 981-7109.

73 CHEVY VEGA - Flame red, hatchback, pop-out windows, auto trans, extra snows, low mileage. \$1800. 981-7169.

70 OLDS 88 CONV - R/h, ps/pb, 2 dr, air cond, am/fm stereo, very low miles, excel mech cond. \$1875. 289-0020 after 7.

64 DODGE POLARA - 68-440 eng, Hurst 4 spd, 4:88 rear, Sun & SW guages, headers, Holley. Asking \$800. 286-9197.

68 PONTIAC WAGON - Excel cond, auto, roof rack. \$1000 firm. Reilly, Ext. 3254, 744-8680.

71 MOTORCYCLE - 5 spd Motorcross w/Hodaka 100 cc eng. Asking \$225. Izzy, Ext. 3613.

VW AUTO TRANS - From 1968 bug, excel cond. \$125. M. Sautter, Ext. 4417, 924-3338.

69 PONTIAC FIREBIRD - 430 V8, ps/pb, air cond, new tires & shocks, auto trans, 37,000 mi. \$1800. 475-5094.

64 FORD ECONOLINE VAN - Good running cond. \$225. George, Ext. 3783, 732-6647.

66 WAGONEER - 4 w/d. \$1000. 286-3793 after 6.

70 VW SQUAREBACK - Auto trans, rear defroster, front disc brakes, new batt, excel cond, orig owner. Bob, 473-8186 after 6.

14" WHEELS - Chevy & Pontiac, \$5/pr; 2 bbl carb & manifold for 64-65 Rambler, \$5; all good cond. Bob, Ext. 4652, 289-0357.

TIRES - 4 ea .25x15, 2 snows, 2 reg, less than 1000 mi, for Volvo or Peugeot. \$50 absolutely firm. Ext. 3163, 732-9384.

